

U.S. Pat. Ser. No. 09/942,820
January 19, 2006
Page 6 of 9

REMARKS

Claims 31 to 41 are pending in this application. Claims 31 and 38 are independent. Through the present amendment, claim 40 is amended.

Claims 31 through 41 stand rejected by the Examiner under 35 U.S.C. § 103(a) in view of U.S. Patent No. 6,307,868, issued to Rakib *et al.* on October 23, 2001 (hereafter "Rakib") and of U.S. Patent No. 6,377,640, issued to Trans on April 23, 2002 (hereafter "Trans").

Claim 40 is objected to under 37 CFR 1.75(c).

Claim Objections

Claim 40 is objected to under 37 CFR 1.75(c) as being of improper dependent form. The reference in claim 40 to claim 34 has been changed to claim 38 in the present amendment. Applicants trust that this change addresses the Examiner's objection.

Claim Rejections - 35 U.S.C. § 103

Claims 31 through 41 stand rejected by the Examiner under 35 U.S.C. § 103(a) as being unpatentable over Rakib in view of Trans. Applicants respectfully traverse this rejection.

The Examiner bases his rejection of independent claims 31 and 38 upon the combination of Rakib and Trans. However, there is an element found in the present invention that is attributed to Trans but instead is missing from Trans (and from Rakib).

The Office Action notes that there is no reference in Rakib to the setting of "a delay provided by said first delay element to said delay value, so as to reduce

U.S. Pat. Ser. No. 09/942,820
January 19, 2006
Page 7 of 9

distortion caused by near end cross-talk and echo in signals received over the channel". The Office Action says that Trans supplies this element because echo and cross talk are inherently included in the distortion of the signal, using citations to column 38, lines 32-47, as well as to Figures 1B3, 2, and 10. However, the applicants respectfully submit that this element can not be found in Trans. Please look to column 38 of Trans:

Therefore, the Com2000™ Synchronous Communication Channel and Com2000™ Channel Measurement and Calibration, and Channel Equalization Technologies in concert deliver a new level of Noise Suppression method that enables the 1000/2000BaseT to recover the 6 dB signal degradation and also obtain an extra 2 dB for Noise margin improvement over the 1000BaseT. The noise suppression method improves the NEXT and ECHO cancellers by suppressing the relative phase offset of the interfered and interfering signals that effect the receiver filter performance (see FIG. 10a,10b). The method measures the channel distortions and uses filters to compensate for this distortion. More specifically, this is done by using a transmit pulse shaping filter and by receiving ECHO, NEXT, FFE and DFE filters. The method equalizes the desired signal in such a way that the impulse response from the transmitter to the receiver is as close as a Nyquist pulse, which goes through zero at all multiples of the symbol period except at the origin. It also equalizes the NEXT/ECHO signal (from local transmitters) in such a way that the impulse response from the local transmitter and local receiver goes through zero at all multiples of the symbol period, including the origin.
See FIG. 10B. After passing through a 100 m CAT5 loop

Here, Trans discusses removing the effect of echo with filters (as opposed to adjusting clocks). There is no indication of adjusting the delay in response to a command from the master, as required by claims 31 and 38. This feature is not found in Figures 1B3, 2, nor 3, either, and thus the Applicants request that the rejection under 35 U.S.C. § 103(a) be removed.

Furthermore, there is no motivation to combine the Trans reference with the Rakib reference. Rakib is written to a SCDMA implementation, typically used for communication over a cable television network (see title and column 6 lines 1-6). Trans is written towards gigabit Ethernet over 10BaseT, 100BaseT or 1000BaseT (see figure 1C and 4) running over CAT5 cable (see figure 34). These are different protocols running over different media, and thus are in different fields of endeavor. Obviousness can only be established by combining or modifying the teachings of the

U.S. Pat. Ser. No. 09/942,820
January 19, 2006
Page 8 of 9

prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one skilled in the art. There is no motivation to combine in either reference, and the Office Action fails to cite to a motivation in either reference to combine them. Furthermore, the teaching or suggestion to make the claimed combinations and the reasonable expectations for success must both be found in the prior art, not in the applicant's disclosure. Thus, the combination of Rakib with Trans is improper.

A further distinction between Rakib, Trans and claim 31 of the present invention is found in the way that Rakib determines the master Rx clock. Claim 31 requires "(b)(ii)a clock recovery circuit that generates a master Rx clock from a clock signal embedded in the received signal".

Rakib generates his Rx clock based upon the Tx clock (phase shifted). See Rakib at column 4 lines 29-38 "a central unit receiver with any compatible coherent detector to detect the signal transmitted from the remote unit transmitter, with the central unit detector using the central unit master carrier from the master carrier oscillator in the transmitter but adjusted in phase to account for propagation delay from the remote unit." The Rx clock in the present invention (taken from the clock recovery circuit) is different from what is described in Rakib.

Trans also uses the same reference clocks on the receiver as on the transmitter. Figure 34 of Trans clearly show, in element 222, reference clocks that are used for both the Analog Tx 231 and the Analog Rx 232.

Since this element is distinct from what is disclosed in both Trans and Rakib, the applicants respectfully request that the examiner remove this rejection from claim 31.

Claims 32-37 depend upon claim 31, and claims 39-41 depend upon claim 38. Each dependent claim includes all limitations from the independent claims 31 and 38, and are thus patentable for the abovementioned reasons.

For these reasons, withdrawal of the rejection under 35 U.S.C. § 103(a) of claims 31 through 41 is requested.

U.S. Pat. Ser. No. 09/942,820
January 19, 2006
Page 9 of 9

CONCLUSION

The pending claims, as amended, define subject matter that is distinct from both Rakib and Trans. Claims 31-41 are pending and in condition for allowance. Applicants respectfully request prompt issuance of this application.

The commissioner is authorized to charge deposit account 503650 for any fees associated herein.

Respectfully Submitted,



Richard A. Baker, Jr.
Registration No. 48, 124
3COM CORPORATION
350 Campus Drive
Marlborough, MA 01752
Telephone: 508-323-1085

Certificate of Mailing/Transmission (37 CFR 1.8)

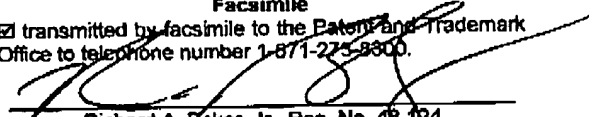
I hereby certify that this correspondence is, on the date shown below, being:

Mailing

☐ deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313.

Facsimile

☒ transmitted by facsimile to the Patent and Trademark Office to telephone number 1-877-275-9300.



Richard A. Baker, Jr., Reg. No. 48, 124
Date: January 19, 2006